nervous system as a circulatory apparatus. But a nervous system is not a hollow organ capable of being injected, and the imputation seems to have been made a little inconsiderately. The discussion not having related to the Accela I do not know how far my results may apply to the Planariæ injected by M. Blanchard; but in all a sheath seems to exist around the nerves, and if the contiguous lacunæ also existed, we should have in them a natural explanation of all the difficulties, and the proof that the mistake has not been entirely on the side of the French zoologist.—*Comptes Rendus*, July 20, 1885, p. 256.

The Nest of the Fifteen-spined Stickleback. By Prof. Karl Möbius.

Among the fishes of the Bay of Kiel the sea-stickleback (*Spinachia vulgaris*, Flem.) is distinguished by the remarkable instinct of constructing a nest for its eggs and young. For this purpose it employs delicate plants which grow in the shallow water, and masses these upon *Zosteræ* or the fronds of seaweeds which wave below the surface of the water or on the piles of landing-stages, until they form a soft rounded mass of 5–8 centim. in diameter. In this nest the female, in May or June, deposits several masses of ova, and the male surrounds the nest with white silky threads and then keeps watch by it.

All this has long been known, but exact knowledge of the constitution of the threads and the place of their origin has hitherto been wanting. The examination of male sea-sticklebacks in May and June 1884, enables me to state that the threads are usually from 0·12 to 0·13 millim. in diameter, and consist of several cords stuck together, which, again, are composed of very fine parallel threads. The substance of which they are composed is nitrogenous, and is a peculiar modification of mucine, as appears from its behaviour towards various acids and alkalies. It is *formed* in the kidneys of the male, and, indeed, in the *epithelial cells of the urinary canals*, which exert this form of activity only at the time of reproduction, and during this period behave towards staining reagents in the same way as the muciferous organs of other Vertebrata.

The kidneys of mucus-bearing sea-sticklebacks are inflated, especially at their posterior extremity. From the kidneys the mucus passes through the ureters into the bladder, which is thereby dilated into a large pyriform vesicle, from the opening of which the mucus finally oozes out as a white thread-forming mass and attaches itself to solid objects that it touches. A male stickleback from the urinary aperture of which mucus protrudes therefore needs only to move around the nest in order to spin round the masses composing it and the adherent ova.—*Schriften naturwiss. Vereins für Schleswig-Holstein*, Band vi. Heft 1, 1885.